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EXAMINER	
PHAM, TIMOTHY X	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,896	ROUSU ET AL.	
	Examiner	Art Unit	
	TIMOTHY PHAM	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-10, and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al. (hereinafter "McConnell"; US Patent No. 6961019) in view of Thomas et al. (hereinafter "Thomas"; US Patent No. 7010270).

Regarding claims 1 and 12, McConnell discloses a device (22) (Fig.1, reference 100) and method for improving the performance of a receiver (30), which receiver (30) is combined in a single device (22) with a communication system transceiver (40) exchanging signals via a radio interface in a first frequency band, and which receiver (30) receives signals via a radio interface in a second frequency band comprising:

a communication system transceiver (40) for exchanging signals via a radio interface in a first frequency band (Fig.1, combination of references 102, 104, 106, 108, and 110; Abstract; col. 3, lines 13-15, e.g., circuitry between the wireless transceiver and GPS receiver);

a receiver (30) for receiving signals via a radio interface in a second frequency band (Fig. 1, reference 136; Abstract; col. 3, lines 14, 63, e.g., GPS receiver);

a processing portion (34) (Fig. 1, combination of references 122, 124, 126, and 128) for detecting presence of interfering signals in said second frequency band (col. 4, lines 29-32, e.g., by properly adjusting the phase and amplitude of signal 208 via controller 128 and blocks 204 and 206, the effects of interfering signal 132 can be reduced or eliminated).

McConnell fails to specifically disclose determining a timing pattern for detected interfering signals based on a timing information provided by said communication system transceiver (40), which timing information is indicative of timing for transmissions employed by said communication system transceiver (40);

However, Thomas discloses a positioning system (Fig. 7, 2nd SUBUNIT) for detecting presence of interfering signal in said second frequency band (col. 3, lines 20-23; col. 4, lines 4-10, e.g., must handle interfering transmission bursts generated by the GSM transceiver subunit) and for determining a timing pattern for detected interfering signals based on a timing information provided by said communication system transceiver (40), which timing information is indicative of timing for transmissions employed by said communication system transceiver (40) (col. 5, lines 7-10; col. 8, lines 30-31, 42; col. 11, line 57 through col. 12 line 3, e.g., receive at least one signal from the second subunit specifying time, frequency and/or output level, therefore, determining a timing pattern).

Therefore, taking the teachings of McConnell in combination of Thomas as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to determine a timing pattern for detected interfering signals based on a timing

information provided by communication system transceiver for advantages of reducing receiver sensitivity degradation.

Moreover, McConnell discloses processing portion (34) ((Fig. 1, combination of references 122, 124, 126, and 128)) for causing a manipulation of signals reaching said receiver (30) (col. 4, lines 3-6, e.g., the GPS receiver 136 is desensitized by such a signal either by inter-modulation mixing effects which occurs within amplifier 122 or by GPS in band interference, therefore, it is a manipulation of signal).

McConnell fails to specifically disclose during time intervals defined by a determined timing pattern, in order to reduce performance degradation due to interfering signals originating from a transmitter (21) employing a same timing for transmissions as said communication system transceiver (40) of said device (22).

However, Thomas discloses a positioning system (Fig. 7, 2nd SUBUNIT) for causing a manipulation of signals reaching said receiver (30) during time intervals (col. 2, lines 47-50, e.g., a low noise amplifier increased interfering input signals and degrade the overall noise figure, therefore, it causes a manipulation of signals) defined by a determined timing pattern, in order to reduce a performance degradation due to interfering signals originating from a transmitter (21) employing a same timing for transmissions (col. 3, lines 19, e.g., at the same time the GPS receiver is to reject a large number of much stronger unwanted signals) as said communication system transceiver (40) of said device (22) (col. 2, lines 35-37; col. 6, lines 14-18; col. 8, lines 34-39; col. 13, lines 5-15, e.g., the GPS receiver subunit sensitivity is degraded by a factor of 1/8 or equivalent 9 dB during transmission by the GSM transceiver subunit).

Therefore, taking the teachings of McConnell in combination of Thomas as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to set time intervals defined by a determined timing pattern and to employ a same timing for transmissions as communication system transceiver for advantages of increasing the receiver sensitivity.

Regarding claim 2, McConnell in combination of Thomas discloses device (22) (McConnell: Fig.1, reference 100) according to claim 1 above, wherein said processing portion (41) (McConnell: Fig. 1, combination of references 104, 108, 110, 112, 114, and 116) detecting the presence of interfering signals in said second frequency band forms part of said communication system transceiver (40) (McConnell: col. 3, lines 66 through col. 4, line 1; col. 4, lines 29-32, e.g., when antenna 102 is transmitting signal 30, an interfering signal 132 occurs when antenna 102 is transmitting wireless system voice data and/or digital or analog data).

Regarding claim 3, McConnell in combination of Thomas discloses device (22) (McConnell: Fig.1, reference 100) according to claim 1 above, wherein said processing portion (34) (McConnell: Fig. 1, combination of references 122, 124, 126, and 128) detecting the presence of interfering signals in said second frequency band forms part of said receiver (30) (McConnell: col. 4, lines 29-32, e.g., by properly adjusting the phase and amplitude of signal 208 via controller 128 and blocks 204 and 206, the effects of interfering signal 132 can be reduced or eliminated, therefore, detecting the presence of interfering signals).

Regarding claims 4 and 14, McConnell in combination of Thomas discloses device (22) (McConnell: Fig.1, reference 100) and method according to claims 1 and 12 respectively above,

wherein said receiver (30) (McConnell: Fig. 1, reference 136; Abstract; col. 3, lines 14, 63, e.g., GPS receiver) includes an attenuating component (33) (McConnell: Fig.1, references 122 and 124; col. 3, lines 54-65, e.g., noted that a band pass filter), and wherein said processing portion (34) for causing a manipulation of signals reaching said receiver (30) (McConnell: col. 4, lines 3-10, e.g., the GPS receiver 136 is desensitized by such a signal either by inter-modulation mixing effects which occurs within amplifier 122 or by GPS in band interference, therefore, it is a manipulation of signal) causes said manipulation by varying an attenuation applied by said attenuating component (33) based on said timing pattern for attenuating signals received by said receiver (30) (Thomas: col. 5, lines 7-10; col. 8, lines 30-31, 42; col. 11, line 57 through col. 12 line 3, e.g., receive at least one signal from the second subunit specifying time, frequency and/or output level, therefore, determining a timing pattern).

Therefore, taking the teachings of McConnell in combination of Thomas as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to determine a timing pattern for detected interfering signals based on a timing information provided by communication system transceiver for advantages of reducing receiver sensitivity degradation.

Regarding claims 5 and 15, McConnell in combination of Thomas discloses device (22) (McConnell: Fig.1, reference 100) and method according to claims 4 and 14 respectively above, wherein said processing portion (34) (McConnell: Fig. 1, combination of references 122, 124, 126, and 128) for causing a manipulation of signals reaching said receiver (30) sets said attenuation higher as an intensity (Thomas: col. 5, lines 3-5; col. 13, lines 24-29, e.g., for the attenuation at the maximum frequency, a much higher attenuation of A2 may be achieved) of

detected interfering signals becomes higher (McConnell: col. 4, lines 3-6, e.g., the GPS receiver 136 is desensitized by such a signal either by inter-modulation mixing effects which occurs within amplifier 122 or by GPS in band interference, therefore, it is a manipulation of signal).

Therefore, taking the teachings of McConnell in combination of Thomas as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have a processing portion for causing a manipulation of signals reaching receiver as suggested by McConnell and to set attenuation higher as an intensity of detected interfering signals becomes higher as suggested by Thomas to implement degradation the reception performance of the receiver sensitivity.

Regarding claims 6 and 16, McConnell in combination of Thomas discloses device (McConnell: Fig.1, reference 100) and method according to claims 1 and 12 respectively above, wherein said processing portion (McConnell: Fig. 1, combination of references 122, 124, 126, and 128) for causing a manipulation of signals reaching said receiver causes said manipulation by causing a blocking of a reception of said signals (McConnell: lines 3-6, e.g., the GPS receiver 136 is desensitized by such a signal either by inter-modulation mixing effects which occurs within amplifier 122 or by GPS in band interference, therefore, it is a manipulation of signal) based on said timing pattern (Thomas: col. 5, lines 7-10; col. 8, lines 30-31, 42; col. 11, line 57 through col. 12, line 3, e.g., receive at least one signal from the second subunit specifying time, frequency and/or output level, therefore, determining a timing pattern).

Therefore, taking the teachings of McConnell in combination of Thomas as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by

applicant to have a processing portion for causing a manipulation of signals reaching said receiver causes said manipulation by causing a blocking of a reception of said signals as suggested by McConnell based on said timing pattern as suggested by Thomas for advantages of reducing receiver sensitivity degradation.

Regarding claims 7 and 17, McConnell in combination of Thomas discloses device (McConnell: Fig.1, reference 100) and method according to claims 1 and 12 respectively above, wherein said processing portion (McConnell: Fig. 1, combination of references 122, 124, 126, and 128) for causing a manipulation of signals reaching said receiver causes said manipulation by causing a disregarding of said signals in an evaluation of said signals (McConnell: col. 4, lines 2-6, 11-17, e.g., since the interfering signal 132 so strong and real filters have limited stop band capability, the GPS receiver is desensitized by such a signal) based on said timing pattern (Thomas: col. 5, lines 7-10; col. 8, lines 30-31, 42; col. 11, line 57 through col. 12, line 3, e.g., receive at least one signal from the second subunit specifying time, frequency and/or output level, therefore, determining a timing pattern).

Therefore, taking the teachings of McConnell in combination of Thomas as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have a processing portion for causing a manipulation of signals reaching said receiver causes said manipulation by causing a disregarding of said signals in an evaluation of said signals as suggested by McConnell based on said timing pattern as suggested by Thomas for advantages of reducing receiver sensitivity degradation.

Regarding claims 8 and 18, McConnell in combination of Thomas discloses device (McConnell: Fig.1, reference 100) and method according to claims 1 and 12 respectively above, wherein said processing portion (McConnell: Fig. 1, combination of references 122, 124, 126, and 128) for causing a manipulation of signals reaching said receiver causes said manipulation by detuning said second frequency range (McConnell: col. 4, lines 2-6, e.g., since the interfering signal 132 so strong and real filters have limited stop band capability, the GPS receiver is desensitized by such a signal).

Regarding claims 9 and 13, McConnell in combination of Thomas discloses device (22) (McConnell: Fig.1, reference 100) and method according to claims 1 and 12 respectively above, wherein said processing portion (34) (McConnell: Fig. 1, combination of references 122, 124, 126, and 128) is for causing a manipulation of signals reaching said receiver (30) in time intervals during which said communication system transceiver (40) of said device (22) transmits signals at least with a certain power level (McConnell: col.3, lines 24-39, e.g., the GPS front end circuitry includes a detector which provides the system a relative indication of the power level of the received wireless signal), in order to reduce a performance degradation due to interfering signals originating from said communication system transceiver (40) of said device (22) (McConnell: col. 3, lines 8-10, e.g., can be used to reduce or eliminate the degradation of GPS receiver sensitivity in other wireless transceiver).

Regarding claim 10, McConnell in combination of Thomas discloses device (22) (McConnell: Fig.1, reference 100) according to claim 1 above, wherein said receiver (30) (Fig. 1, reference 136) is a satellite positioning system receiver (Abstract; col. 5, lines 8-9, e.g., Satellite Positioning System (SATPS)).

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell in combination of Thomas as applied to claim 1 above, and further in view of Teo et al. (hereinafter "Teo"; US 2002/0086708).

Regarding claim 11, McConnell in combination of Thomas discloses device (McConnell: Fig.1, reference 100) according to claim 1 above, wherein said receiver (McConnell: Fig. 1, reference 136; Abstract; col. 3, lines 14, 63, e.g., GPS receiver), but fails to specifically disclose receiver is a digital video broadcast-terrestrial receiver.

However, Teo discloses an apparatus having a receiver is a digital video broadcast-terrestrial (paragraph [0078], e.g., the DVB-T).

Therefore, taking the teachings of McConnell in combination of Thomas and Teo as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have a receiver that is a digital video broadcast-terrestrial receiver in order to provide digital video stream, as well as providing high speed data stream.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571-272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/
Examiner, Art Unit 2617

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617